

Solution Options for Ending Student Food Insecurity at the University of Wyoming

February 2020

Offered to: University of Wyoming (UW) Administration, UW Board of Trustees, ASUW Food Security Taskforce, and anyone interested in making sure UW students don't go to class hungry.

Contributors: Dr. Rachael Budowle (faculty), Dr. Christine Porter (faculty), Isabela Farmer (student), & Ariel Preble (student). With support from students in Fall 2019 HLED 4020/5020 Food, Health & Justice class, students in the ENR Sustainability minor (2017 to present), the Sustainability Club RSO, and ASUW, especially Anna Savage.

Purpose: This report expands on the "Combatting Student Food Insecurity" report of November 2019. It summarizes what other universities are doing to address student food insecurity, the work that UW has already begun, that what UW can do to make sure UW students don't go to class hungry.

Rationale: Over a third (37.4%) of our undergraduate students are unsure if they have enough to eat or do not have enough to eat. Half of these students (18.7%) worry about shortages, with the other half (18.7%) actually skipping or reducing meals for lack of food.¹ Food-insecure students are more likely to suffer from anxiety and depression,² poorer physical health,³ lower GPAs,⁴ higher drop-out rates,⁵ and housing insecurity and homelessness.⁶

Contents

- Solution Options for Ending Student Food Insecurity at the University of Wyoming 1
- Swipe Sharing through Dining 2
 - Swipe Out Hunger 2
 - Other swipe share programs 3
 - Next steps for UW? 3
- Campus Grocery Stores and Markets 3
 - Campus-run store examples 3
 - Supermarket branches on campus 4
 - Campus co-ops 4
 - Campus farmers markets 4
 - Next steps for UW? 4
- Good Food Sharing + Waste Reduction 5
 - Catering alerts 5
 - Student-led alerts with Share Meals App 5
 - Next steps for UW? 6

Growing Food on Campus	6
Small indoor growing systems tied with student-run food-sharing cabinets already on campus	6
Student Housing Community Gardens	7
Student Farms	7
Greenhouses, rooftops and other central growing	7
Permaculture on Campus.....	7
Next steps for UW?	8

Swipe Sharing through Dining

Many universities share dining hall “swipes” with students who need them. The swipes can be donated by other students and by the institution. As described below, universities have adopted the off-the-shelf Swipe Out Hunger approach, worked with SODEXO, and built their own systems.

Swipe Out Hunger

How it Works: Swipe Out Hunger started in 2010 at UCLA by a group of students. Today, over 90 colleges and universities use it.⁷ The goal is to end food insecurity on campus by having students donate extra meal swipes to pools that are then distributed to students in need. The Swipe Out Hunger Guide explains how to start a program.⁸

How it Helps: Swipe Out Hunger universities have shared 1.7 million meals.⁹ Their evaluations show that among students who received meals, 2 out of 3 are more financially stable, 63% feel their campus cares about them, more than 50% perform better in school, 73% are less anxious about food, and 72% are able to eat more regularly because of swipe sharing programs.¹⁰

Also, in Colorado State University’s (CSU’s) independent swipe share program described below, they found that those on the waitlist for meal shares had significantly lower GPAs compared to the students who received the shared meals.¹¹

Who’s Doing It: Each university crafts its own approach to implementing Swipe Out Hunger. For example:

- At Cornell University, students donate one meal a semester to a swipe out hunger fund. These meals are then distributed to students in need and can be used at any of Cornell’s all-you-can-eat dining services. Eligibility for students is decided by the First Generation and Low-Income Student Support Office.¹²
- University of California Davis (UC-Davis) holds a Swipe Out Hunger drive at the end of each semester.¹³ Members of the community and students can donate money that is then distributed to UC Davis’ meal sharing, food pantry, and food bank programs. This drive raised \$7,750 in the 2017-2018 school year.

Other swipe share programs

CSU has a comprehensive Rams Against Hunger program to end food insecurity among their students, run through the Student Center and funding via state block grants, donations, and student fees. It includes a swipe sharing program. Students apply for meals to Student Financial Services. They must be enrolled in at least 6 credits, have a Ram Card, have an expected family contribution of under \$10,000, and cannot already have a meal plan. Students then can receive 75 meals on their dining plan per semester.¹⁴ They do not have enough funding to enroll all eligible students and keep a waitlist.

Also, Sodexo partners with 13 colleges to execute swipe share programs.¹⁵ For example, at University of Vermont students fill out a meal request form with a faculty member that goes through financial aid. Students can qualify for up to 14 meals a semester. They note that FAFSA requirements constrain the number of meals.

Next steps for UW?

UW Dining plans to pilot a swipe share program this year. UW could adapt and adopt practices and forms from other institutions, including from CSU. Allowing students to share a few 'extra' meals from their plan each semester is a good way to educate people about the program and issue and help to involve students. However, a program that shares enough meals to make an impact will need to be funded by or via UW.

Campus Grocery Stores and Markets

In our informal surveys, 100% of UW students we have asked about food solutions they would like to see on campus have said they would like to have a campus grocery store. Within the 20 students in Porter's Food, Health and Justice class, who helped create this report, a grocery store was their top priority out of all these options.

Campus grocery stores have at least three models: campus-run shops (sometimes with subsidized food or paired with food-sharing pantries), chain-run stores, and co-ops. Each is discussed below. Some campuses also have farmers markets.

Campus-run store examples

Cornell University's [Anabel's Grocery](#) is a student-run grocery store on campus, subsidized with student funds.¹⁶ Available only to students, it sells bulk foods, staples, and fresh fruits and vegetables. Anabel's also offers cooking classes, sustainable food workshops and a campus farmers market. It also shares donated foods at no cost, serving partly as a campus pantry in that sense.

University of Pittsburgh's [Forbes Street Market](#) is run by university dining, with Sodexo. It offers "prepared foods, bulk foods, a bakery station with Aspetto coffee, fresh meat and seafood, a slice to order deli, crisp produce, a wide variety of dry grocery items" and "meal solutions."¹⁷ Anyone can shop there.

Oregon State University's [Cascadia Market](#) is also run by dining. They have three campus store branches with fresh produce, household items, and meat and dairy products. It is one of

the few campus grocery stores that accepts SNAP nutrition benefits as a form of payment.¹⁸ Anyone can shop there.

Massachusetts Institute of Technology (MIT)'s [TechMart](#) is an at-cost grocery store on campus run by dining and "in collaboration with Bon Appetit." They sell to-go meals and "staples like vegetables, fruit, rice, flour, pasta, soups, sauces, grains, spices, meats, and dairy," provides students with convenient on-campus access to affordable groceries.¹⁹ It shares space with a campus café.

Supermarket branches on campus

University of South Florida has partnered with the Publix grocery chain. Publix and opened a branch on the South Florida campus near the student housing and it employs students.²⁰

Several other universities, e.g., University of Kentucky, Michigan State University, and the University of Washington, have partnered with Target to open small branches on campuses. 23 Target branches have opened on or near college campuses in 13 states. These Target locations provide food options such as fresh produce and grab and go lunches, personal and hygiene products, electronic chargers and technology.²¹ They can start as small as 15,000 square feet or less which is a third the size of a standard Target and vary by site.²²

Campus co-ops

The food co-op store in Moscow, Idaho started [a branch on the University of Idaho campus](#) in 2018 in central campus. They sell "organic coffee, fresh-made baked goods, packaged groceries, and a small selection of personal care items" and "snacks, lunch options, and small grocery items like chips and salsa or Halo Top ice cream." They buy from local vendors including the GROW-up garden which is a community-based garden that provides low-cost produce to the campus co-op.²³ University of Maryland had a student-run co-op from the late 1970s but it closed in 2019.

Campus farmers markets

Many universities host farmers markets or stands on campus in the fall. This includes, for example [University of Wisconsin Madison](#), [North Carolina State](#), [University of Michigan](#), [UC Davis](#), [University of Utah](#), and [University of Montana](#). Stands usually have produce from student farms. Markets include multiple local vendors.

Next steps for UW?

This is among the most ambitious of the solutions. However, it appears to also be the most desirable among students and could have many benefits to the UW community and possibly beyond.

UW could found a campus store talk with Target about a branch, or talk with Big Hollow²⁴ about a possible co-op branch.

A campus store could potentially be open to the public at regular prices while offering at-cost or subsidized prices only to students. A store could also provide some pantry-style services, sharing some foods with students at no cost, e.g., in a free section available only to them.

(The original “combatting” report summarizes a campus food pantry option which is also used on many campuses, including LCCC in Cheyenne. This can be part of a UW solution, but students so far clearly report preferring a store, or a store that also offers some free food.)

Good Food Sharing + Waste Reduction

Nationally, we waste about 40% of our food.²⁵ Like all American households and institutions, UW currently wastes significant amounts of good food. As noted below, UW dining and catering share some food with the Laramie Soup Kitchen. They also software and other practices to minimize waste. However, lots of good, edible food is still thrown away.

UW also sends compostable waste to the dump. Instead of creating organic matter for enriching soil, we pay for disposal (though crush and dehydrate it to minimize these costs). In the dump, such organic waste generates the powerful greenhouse gas methane. The Sustainability Club RSO conducted a campus-wide waste audit in 2018. They found that 60% of waste from dining locations across campus is currently compostable (i.e., includes large amounts of food waste).

Solutions other institutions are using are described below, which both share good food with students and reduce food waste.

Catering alerts

Some campus dining operations now offer a student text alert system. Students who sign up receive alerts to come pick up food that is still being served at the end of events. Dining or other hosts send the alerts. Students generally have a 30-minute window to come pick it up and can bring their own containers. This shares good food with students and reduces waste.

The Haub School at UW has piloted a version of such a system. Also, many university campuses offer such an alert system. Most nearby, **CSU** has started a [food recovery program alert system](#). As their website says about this program: “Ram Food Recovery program is intended to support members of the campus community who are experiencing food insecurity while also reducing waste by making food left over from Housing & Dining Services catered events available for pick up. This program is free for all Colorado State University students, faculty and staff. How it works:

- Register at ramfoodrecovery.colostate.edu with your cell phone.
- You will receive a text alert when food is available. This message will include time, location and a brief description of the food available.
- Bring your own clean (free of contaminants) container. Participants must agree to the CSU waiver and food safety guidelines to participate.
- That's it!

To ensure food safety, food availability will be limited to 30 minutes after alert is sent. The food is available on a first-come/first-served basis. Participants may opt out of receiving text alerts at any time by responding STOP to any text alert.”

Student-led alerts with Share Meals App

This free [app](#) allows students to contact each other about sharing a meal swipe or extra food with nearby students who have signed up to receive alerts. New York University (NYU) created the Share Meals App as a platform for students to share extra meal swipes and post extra food available from club events.²⁶ A student sends an alert about what is available and others within

a close radius receive it. The app then helps them identify where to meet up or where the food opportunity is.

Next steps for UW?

We have a lot to build on already at UW for these good food sharing solutions. Dining already shares some dining and catering food that UW cannot use with the Laramie Soup Kitchen. UW students started work to create this relationship as a course project. Sharing began four years ago. In 2019 UW shared 10,000 pounds of food, up from 7,580 pounds in 2018). We suggest that this program should continue.

The Haub School of Environment and Natural Resources has their own pilot alert system. Students sign up to receive emails regarding the Kendall House Food Share Cabinet and leftover food at the end of Haub School events. Students are alerted when the food cabinet is restocked or given 30 minutes to collect food that is proven safe for consumption through other food recovery programs. This program is intended to help students “stay energized, build community, and reduce waste”. Students automatically agree that the Haub School nor UW is held liable for accidents, allergic reactions or any foodborne illness from the food sharing/recovery program. The alert system maintains anonymity to decrease the stigma of receiving food and include email addresses only in the BCC line.

In composting, the ACRES student farm composts fruit and vegetable waste. This report focuses on ensuring students have enough to eat. However, we will briefly mention that many universities have institutional composting programs. At UW, An institution this size needs a more scaled solution that can take all organic waste (e.g., meat, paper, and compostable disposable dishware). The Sustainability Club and other students working with Dr. Rachael Budowle have done extensive research on this issue. Their work offers solid foundations for decision-making and action.

Growing Food on Campus

Most institutions have university or student-led programs growing some food on campus. Some examples of options for this are outlined here.

Small indoor growing systems tied with student-run food-sharing cabinets already on campus

Students, faculty and staff at UW have “invented” food-sharing cabinets. At least five units have created these or are in the middle of doing so and more are interested. These cabinets (or kitchens or shelving) have self-stable food either shared or purchased for any person to take from. Each one is founded and managed locally by people in that department. For those interested in also exposing students to growing food, and providing small amounts of, e.g., fresh herbs, indoor growing systems could be added to their programs. Some growing systems that could work for this include: [Tower Garden HOME](#),²⁷ [ZipGrow](#) (invented at UW),²⁸ gardening shelving with LED lights,²⁹ and [EarthBoxes](#). Prices range from under \$100 for EarthBoxes to up to one thousand for some vertical growing systems.

Student Housing Community Gardens

Many institutions offer their community gardening spaces available to students living in university housing. These are usually run by campus housing. For example, the [garden website](#) at University of Wisconsin-Madison shares extensive operational and logistics information.³⁰ Some, such as at [UC Santa Barbara](#),³¹ are in partnership with food security university programs but run somewhat independently by student groups. Some student farms also offer plots to students, including UW's ACRES farm.

Student run-greenhouses have been shown to improve mental and physical wellbeing as well as a greater sense of community for students.³² Campus food growing projects also provide extensive experiential education opportunities.

Student Farms

Most land-grant institutions, and many universities, have student-run farms. Some share or sell produce on their campuses, such as Cornell University's [Dilmun Hill Student Farm stand](#) on campus. Like UW ACRES, they also offer a [CSA](#), or shares of a season's harvest delivered to members each week. This is their main funding source. They also offer several student volunteer work positions in exchange for a CSA share.

Also, for example, University of Michigan's student farm helps to supply the [student food cupboard](#) with fresh foods.³³ Michigan State Student Organic Farm³⁴ is a 15-acre farm that provides year-round produce to MSU dining halls, wholesale outlets, as well as an on-campus stand that operates for 7 months. Michigan State Student Organic Farm is home to the Organic Farmer Training Program (OFTP). OFTP offers training to students who hope to become farmers recreationally or professionally.

Montana State University's Towne's Harvest Garden is a 3-acre farm.³⁵ They reported 18,760 pounds of produce grown in 2018 from the farm. The produce was sold at an on-campus farm stand as well as a farm stand at low-income housing complex. Along with the farm stands, food was also donated to Gallatin Valley Food Bank as well as Montana State's camps food pantry.³⁶

Greenhouses, rooftops and other central growing

Most land-grants and many other institutions green houses, used for teaching, research and sometimes also food production for students. Some have built additional ones close to central campus.

For example, at Harvard University, graduate students have led a project implementing green roofs across campus.³⁷ The garden produced approximately 400 pounds of radishes that were then prepared for meals by the dining hall operator. A new University of Arizona roof-top greenhouse supplies thousands of pounds of fresh produce to share with food insecure students and staff.³⁸ Michigan State University has the Bailey GREENhouse & Urban Farm³⁹ which supplies university dining. These examples are all centrally located and open to students.

Permaculture on Campus

Thinking of permaculture as permanent agriculture begins to capture what this approach to growing offers. These gardens and orchards are built to be self-sufficient and sustainable by tapping the diversity, functionality, and resilience of a natural ecosystem. As a result, there are higher yields with less effort.⁴⁰ They are also often planned to be beautiful.

Growing native fruit trees, berry bushes, and other native food plants can supply people simply walking by with food to eat and student clubs or others with a harvest to gather and process into, for example, jams.

Utah State has a campus permaculture program, which aims to “provide educational opportunities for students and the public to learn about and practice sustainable food production methods, including wise use of available space, low water gardening, seasonal eating, and a focus on native edible perennials.”⁴¹ They are growing plums, cherries, apples, kale, tomatoes, currants, elderberries, and more.⁴²

Brigham Young Idaho University (BYU-Idaho) has an apple orchard with over 120 apple varieties. This apple “museum” serves as a tool for the horticulture department to learn skills associated with caring for fruit trees.⁴³

Next steps for UW?

Our growing climate is short and challenging. However, research shows that even here, gardens can yield substantial amounts of food.⁴⁴ For student housing community gardens, residence life could convene residents to explore piloting one this summer.

Planting apple trees and berry bushes on central campus might be a first step towards permaculture while making the fruit available for students in the fall.

With financial support and member student interest, ACRES farm could be a partner in providing fresh food to students through any grocery, farm stand, CSA, cabinet or pantry programs UW develops. Also with such support and interest, ACRES might be able to have an central-campus branch of its growing operations, ideally within a greenhouse.

¹ Office of Student Life, “Study on Collegiate Financial Wellness, University of Wyoming: Food Security on Campus. 2017, p. 2, Ohio State University College of Education and Human Ecology. Nearly 3,000 UW undergraduates were invited to participate; 780 responded. Our 26% response rate was much higher than the 10.5% average among the 47 institutions participating.

² Student Hunger on Campus: Food Insecurity Among College Students and Implications for Academic Institutions. 2018. <https://journals.sagepub.com/doi/pdf/10.1177/0890117117719620>

³ Student Hunger on Campus: Food Insecurity Among College Students and Implications for Academic Institutions. 2018. <https://journals.sagepub.com/doi/pdf/10.1177/0890117117719620>

⁴ Maya E. Maroto, “Food Insecurity among Community College Students: Prevalence and Association with GPA, Energy, and Concentration,” *Community College Journal of Research and Practice*, 39(6), 515–526.

⁵ Hunger on Campus Oct 2016. http://studentsagainsthunger.org/wp-content/uploads/2016/10/Hunger_On_Campus.pdf

⁶ Meghan R. Silva et al, “The Relationship Between Food Security, Housing Stability, and School Performance among College Students in an Urban University,” *Journal of College Student Retention: Research, Theory & Practice*, 1521025115621918, December 14, 2015, doi:10.1177/1521025115621918.

⁷ “FAQ.” *Swipe Out Hunger: Student Hunger is Real*. Accessed February 3, 2020. <https://www.swipehunger.org/ourwork/faq/>.

⁸ “A Guide to Creating Your Campus Sustainable Meal Sharing and Recovery Program.” *Swipe Out Hunger*. https://www.ucop.edu/global-food-initiative/files/Swipe%20Out%20Hunger%20Guide_Final.pdf

⁹ “FAQ.” *Swipe Out Hunger: Student Hunger is Real*. Accessed February 3, 2020. <https://www.swipehunger.org/ourwork/faq/>.

-
- 10 "2019 Impact Report." Swipe Out Hunger: Student Hunger is Real. Accessed February 3, 2020. <https://www.swipehunger.org/2019impactreport/>.
- 11 Novak L and Johnson J. "Students Against Hunger: An Approach to Food Insecurity at Large Public Land Grant University." Colorado State University. https://mountainscholar.org/bitstream/handle/10217/180886/IOUF_IOSA_v26-2016-17.pdf?sequence=1#page=100
- 12 "Residential Life." Student & Campus Life | Cornell University. Accessed February 3, 2020. <https://living.cornell.edu/dine/whoweare/swipe-out-hunger.cfm>.
- 13 UC Davis Student Housing. "Swipe Out Hunger." UC Davis Student Housing. Accessed February 2, 2020. <https://housing.ucdavis.edu/dining/swipe-out-hunger/>.
- 14 "Rams Against Hunger: Lory Student Center." Lory Student Center. Accessed February 3, 2020. <https://lsc.colostate.edu/slice/slice-engagement/rams-against-hunger/#1505497146803-e5675d44-bf5b>.
- 15 Buzalka, Mike. "Sodexo Pilots Swipe Out Hunger at 13 Colleges." Food Management, November 1, 2019. <https://www.food-management.com/colleges-universities/sodexo-pilots-swipe-out-hunger-13-colleges>.
- 16 "Frequently Asked Questions." Anabel's Grocery - FAQ. Accessed February 2, 2020. <http://anabelsgrocery.org/faq.php>.
- 17 "Campus Grocery Store to Open Next Summer." Pittwire. Accessed February 2, 2020. <https://www.pittwire.pitt.edu/news/campus-grocery-store-open>.
- 18 "On-Campus Markets." University Housing & Dining Services, June 22, 2016. <https://uhds.oregonstate.edu/dining/campus-markets>.
- 19 Life, Division of Student. "At-Cost Grocery Pilot Opens in Walker Memorial." MIT News, September 26, 2018. <http://news.mit.edu/2018/mit-techmart-at-cost-grocery-store-pilot-opens-in-walker-memorial-0926>.
- 20 Busta, Hallie. "U Of South Florida Brings Grocer Publix to Campus." Education Dive, December 7, 2018. <https://www.educationdive.com/news/u-of-south-florida-brings-grocer-publix-to-campus/543847/>.
- 21 "These Small but Mighty Target Stores Are a College Student's Dream." Target Corporate. Accessed February 2, 2020. <https://corporate.target.com/article/2017/07/july-campus-stores>.
- 22 "Target Small-Format Stores Video, 2018." Target Corporate. Accessed February 2, 2020. <https://corporate.target.com/article/2018/07/small-format-stores>.
- 23 "Community and Business Partners - Moscow Food Co." op. Accessed February 2, 2020. <https://www.moscowfood.coop/business-partners>.
- 24 "Open 8am – 8pm Daily." op. Accessed February 2, 2020. <http://www.laramiecoop.com/>.
- 25 "The Progressive Increase of Food Waste in America and Its Environmental Impact," PlosOne, 2009. <https://doi.org/10.1371/journal.pone.0007940>
- 26 "Share Meals Ending College Hunger." Share Meals. https://sharemeals.org/assets/pdf/share_meals_fact_sheet.pdf
- 27 "Discover Aeroponic Gardening." Tower Garden. <https://www.towergarden.com/aeroponics>.
- 28 "Silicon Valley Company Acquires UW Incubator Grad, Continues Local Operation." Silicon Valley Company Acquires UW Incubator Grad, Continues Local Operation | News | University of Wyoming. Accessed February 1, 2020. <http://www.uwyo.edu/uw/news/2017/06/silicon-valley-company-acquires-uw-incubator-grad.-continues-local-operation.html>.
- 29 Newhouse, Hazel and Stephanie Rose. "Hazel Newhouse." Garden Therapy, January 4, 1970. <https://gardentherapy.ca/build-an-indoor-garden-shelf/>.
- 30 Community Gardens, University Housing, University of Wisconsin. <https://www.housing.wisc.edu/apartments/resident/gardens/>
- 31 UCSB Family Student Housing Gardens. <https://fshgardens.weebly.com/>
- 32 Student Greenhouse Project. Accessed February 2, 2020. <http://sgp.msu.edu/research/index.php>.
- 33 <https://offcampus.umich.edu/article/fighting-food-insecurity-campus>
- 34 "MSU Student Organic Farm." MSU Student Organic Farm. Accessed February 2, 2020. <http://www.msuorganicfarm.org/>.

-
- ³⁵ "Towne's Harvest Garden." Towne's Harvest Garden - Towne's Harvest Garden | Montana State University. Accessed February 2, 2020. <http://townesharvest.montana.edu/index.html>.
- ³⁶ "Towne's Harvest Garden Annual Report 2018." Towne's Harvest Garden. <http://townesharvest.montana.edu/documents/2018AnnualReportTHGFinal.pdf>
- ³⁷ "What's Growing on Your Roof?" Sustainability at Harvard, July 24, 2017. <https://green.harvard.edu/tools-resources/case-study/whats-growing-your-roof>.
- ³⁸ https://tucson.com/news/university-of-arizona-rooftop-greenhouse-helps-feed-students-staff-in/article_8c46c1a5-8ef2-5a21-b357-0f1c1286c69a.html
- ³⁹ "Our Story." Bailey GREENhouse & Urban Farm, September 12, 2018. <https://baileyurbanfarm.org/about/our-story/>.
- ⁴⁰ "USU Extension Permaculture." What Is Permaculture, Anyway? Accessed February 2, 2020. <http://permaculture.usu.edu/what-is-permaculture/index>.
- ⁴¹ "USU Extension Permaculture." History of the USU Permaculture Initiative. Accessed February 2, 2020. <http://permaculture.usu.edu/initiative-history/how-it-started>.
- ⁴² "USU Extension Permaculture." USU Permaculture Initiative. Accessed February 3, 2020. <http://permaculture.usu.edu/>.
- ⁴³ "Apple Orchard Museum." BYU. Accessed February 2, 2020. <http://byuihorticultureresearch.weebly.com/apple-orchard-museum.html>.
- ⁴⁴ "Food Gardeners' Productivity in Laramie, Wyoming: More Than a Hobby," American Journal of Public Health. 2016. <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2016.303108>